## SEQUENCE LISTING

<110> HOOD, John ELICEIRI, Brian CHERESH, David

<120> Methods and Compositions Useful for Modulation of Angiogenesis Using Tyrosine Kinase Raf and Ras

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<151> 1999-08-13

<150> US 60/215,951

<151> 2000-07-05

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<210> 6

<211> 2004

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fustion protein

<220>

<221> CDS

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			gcd Ala 20													96
			ttt Phe													144
			tct Ser													192
			aca Thr													240
			aaa Lys													288
			aga Arg 100													336
gat Asp	tgg Trp	aat Asn 115	act Thr	gat Asp	gct Ala	gcg Ala	tct Ser 120	ttg Leu	att Ile	gga Gly	gaa Glu	gaa Glu 125	ctt Leu	caa Gln	gta Val	384
			gat Asp													432
			aag Lys													480
			cga Arg													528
			gta Val 180								_			Arg		576

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ctc bta ttg ttt cca aat tcc act att ggt gat agt gga gtc cca gca Leu Leu Phe Pro Asn Ser Thr Ile Gly Asp Ser Gly Val Pro Ala 195 200 cta cct tct ttg act atg cgt cgt atg cga gag tct gtt tcc agg atg 672 Leu Pro Ser Leu Thr Met Arg Arg Met Arg Glu Ser Val Ser Arg Met 210 215 cct gtt agt tct cag cac aga tat tct aca cct cac gcc ttc acc ttt 720 Pro Val Ser Ser Gln His Arg Tyr Ser Thr Pro His Ala Phe Thr Phe 225 230 aac acc tec agt cc tea tet gaa ggt tec etc tec cag agg cag agg Asn Thr Ser Ser Pro Ser Ser Glu Gly Ser Leu Ser Gln Arg Gln Arg 250 tcg aca tcc aca cct aat gtc cac atg gtc agc acc acg ctg cct gtg Ser Thr Ser Thr Pro Ash Val His Met Val Ser Thr Thr Leu Pro Val 260 265 270 gac agc agg atg att gag hat gca att cga agt cac agc gaa tca gcc Asp Ser Arg Met Ile Glu Aap Ala Ile Arg Ser His Ser Glu Ser Ala 275 280 tca cct tca gcc ctg tcc agt àgc ccc aac aat ctg agc cca aca ggc 912 Ser Pro Ser Ala Leu Ser Ser Ser Pro Asn Asn Leu Ser Pro Thr Gly 290 295 tgg tca cag ccg aaa acc ccc gtg  $\delta_{ ext{ca}}$ ca gca caa aga gag cgg gca cca 960 Trp Ser Gln Pro Lys Thr Pro Val Pro Ala Gln Arg Glu Arg Ala Pro 310 315 gta tot ggg acc cag gag aaa aac aaa att agg cot cgt gga cag aga 1008 Val Ser Gly Thr Gln Glu Lys Asn Lys Ile Arg Pro Arg Gly Gln Arg 325 330 gat toa ago tat tat tgg gaa ata gaa goo agt gaa gtg atg otg too 1056 Asp Ser Ser Tyr Tyr Trp Glu Ile Glu Ala Ser Glu Val Met Leu Ser 340 350 act cgg att ggg tca ggc tct ttt gga act gtt bat aag ggt aaa tgg 1104 Thr Arg Ile Gly Ser Gly Ser Phe Gly Thr Val Tyr Lys Gly Lys Trp 360 cac gga gat gtt gca gta aag atc cta aag gtt gtc hac cca acc cca 1152 His Gly Asp Val Ala Val Lys Ile Leu Lys Val Val Asp Pro Thr Pro 370 375 380 gag caa ttc cag gcc ttc agg aat gag gtg gct gtt ctg cgc aaa aca 1200 Glu Gln Phe Gln Ala Phe Arg Asn Glu Val Ala Val Leu Arg Lys Thr 385 390 395 400

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	_	_		gtg Wal 420		_		_			_	_			1296
	_		_	cag Gln	<b>T</b> -		_		_	-				_	1344
				acg Thr											1392
				gac Asp											1440
				att Ile											1488
				cag Gln 500	_	_	_		•						1536
				gtg Val											1584
7	_	_	-	tac Tyr							•				1632
				tat Tyr											1680
				gga Gly									•		1728
				gca Ala 580											1776
	_	_		agg Arg					_					•	1824

## 18/20

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		\	595					600					605				
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	_											ctg Leu					1968
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	Val	Gln	Gln 35	Phe	Gly	Tyr	Gln	Arg	Arg	Ala	Ser	Asp	Asp 45	Gly	Lys	Leu	
`	Thr	Asp 50	Pro	Ser	Lys	Thr	Ser 55	Asn	Thr	Ile	Arg	Val 60	Phe	Leu	Pro	Asn	
′	Lys 65	Gln	Arg	Thr	Val	Val 70	Asn	Val	Arg	Asn	Gly 75	Met	Ser	Leu	His	Asp 80	
	Cys	Leu	Met	ГЛЗ	Ala 85	Leu	Lys	Val	Arg	Gly 90	Leu	Gln	Pro	Glu	Cys 95	Cys	
	Ala	Val	Phe	Arg 100	Leu	Leu	His	Glu	His 105	Lys	G1×	Lys	Lys	Ala 110	Arg	Leu	
	Asp	Trp	Asn 115	Thr	Asp	Ala	Ala	Ser 120	Leu	Ile	Gly	GJų	Glu 125	Leu	Gln	Val	
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## 19/20

Thr Phe Leu Lys Leu Ala Phe Cys Asp Ile Cys Gln Lys Phe Leu Leu 150 Asn Gly Phe Arg Cys Gln Thr Cys Gly Tyr Lys Phe His Glu His Cys 170 Ser Thr Lys Val Pro Thr Met Cys Val Asp Trp Ser Asn Ile Arg Gln Leu Leu Phe\Pro Asn Ser Thr Ile Gly Asp Ser Gly Val Pro Ala 195 200 Leu Pro Ser Leu Thr Met Arg Arg Met Arg Glu Ser Val Ser Arg Met 215 Pro Val Ser Ser Gln Mis Arg Tyr Ser Thr Pro His Ala Phe Thr Phe 225 230 235 Asn Thr Ser Ser Pro Ser\ Ser Glu Gly Ser Leu Ser Gln Arg Gln Arg 245 250 Ser Thr Ser Thr Pro Asn Val His Met Val Ser Thr Thr Leu Pro Val 265 Asp Ser Arg Met Ile Glu Asp Ala Ile Arg Ser His Ser Glu Ser Ala 275 280 Ser Pro Ser Ala Leu Ser Ser Ser Pro Asn Asn Leu Ser Pro Thr Gly 290 295 300 Trp Ser Gln Pro Lys Thr Pro Val Rro Ala Gln Arg Glu Arg Ala Pro 310 315 Val Ser Gly Thr Gln Glu Lys Asn Lys\Ile Arg Pro Arg Gly Gln Arg Asp Ser Ser Tyr Tyr Trp Glu Ile Glu Ala Ser Glu Val Met Leu Ser 340 Thr Arg Ile Gly Ser Gly Ser Phe Gly Thr Wal Tyr Lys Gly Lys Trp 360 365 His Gly Asp Val Ala Val Lys Ile Leu Lys Val\Val Asp Pro Thr Pro 375 Glu Gln Phe Gln Ala Phe Arg Asn Glu Val Ala Val Leu Arg Lys Thr 385 390 400 395 Arg His Val Asn Ile Leu Leu Phe Met Gly Tyr Met Thr Lys Asp Asn 405

Ala Arg Gln Thr Ala Gln Gly Met Asp Tyr Leu His Ala Lys Asn Ile
450 460

Ile His Arg Asp Wet Lys Ser Asn Asn Ile Phe Leu His Glu Gly Leu 470 475 480

Thr Val Lys Ile Gly Asp Phe Gly Leu Ala Thr Val Lys Ser Arg Trp
485 490 495

Ser Gly Ser Gln Gln Val Glu Gln Pro Thr Gly Ser Val Leu Trp Met 500 505 510

Ala Pro Glu Val Ile Arg Met Gln Asp Asn Asn Pro Phe Ser Phe Gln 515 520 525

Ser Asp Val Tyr Ser Tyr Gly Ile Val Leu Tyr Glu Leu Met Thr Gly
530 535 540

Glu Leu Pro Tyr Ser His Ile Ash Asn Arg Asp Gln Ile Ile Phe Met 545 550 560

Val Gly Arg Gly Tyr Ala Ser Pro Asp Leu Ser Lys Leu Tyr Lys Asn
565 570 575

Cys Pro Lys Ala Met Lys Arg Leu Val Ala Asp Cys Val Lys Lys Val
580 585 590

Lys Glu Glu Arg Pro Leu Phe Pro Gln Ile Leu Ser Ser Ile Glu Leu 595 . 600 605

Leu Gln His Ser Leu Pro Lys Ile Asn Arg Ser Ala Ser Glu Pro Ser 610 615

Leu His Arg Ala Ala His Thr Glu Asp Ile Asn Ala Cys Thr Leu Thr 625 630 635 640

Thr Ser Pro Arg Leu Pro Val Phe Tyr Ser Phe Leu Pro Phe Phe 645 650 655

Phe Phe Phe Ser Phe Cys Phe Thr Pro Ser Thr Phe 660 665